Chapter 296-803 WAC

LOCKOUT/TAGOUT
(CONTROL OF HAZARDOUS ENERGY)

NEW SECTION

WAC 296-803-100 Scope. This chapter applies to the service and maintenance of machines and equipment, including piping systems, if employees could be injured by the:

– Unexpected energization or start up of the machine or equipment;

OR

– Release of stored energy.

Energy sources include mechanical, hydraulic, pneumatic, chemical, thermal, or other energy, including gravity.

Note:
- Machines and equipment include those that produce high intensity electromagnetic fields.
- When other Title 296 WAC standards require the use of lockout or tagout, they have to be used and supplemented by the procedural and training requirements of this part.

Exemption: This chapter does not apply to:

- Construction activities covered by chapter 296-155 WAC, Construction work.
- Agriculture activities covered by chapter 296-307 WAC, Safety standards for agriculture.
- Maritime activities covered by chapter 296-56 WAC, Safety standards--Longshore, stevedore and related waterfront operations and chapter 296-304 WAC, Safety standards for ship repair, shipbuilding and shipbreaking.
- Oil and gas well drilling and servicing.
- Installations for generating, transmitting, and distributing electrical power (including related communication and metering equipment) that are controlled exclusively by electric utilities.
- Hot tap operations on pressurized pipelines used to transmit and distribute substances such as gas, steam, water, or petroleum products if the employer can demonstrate that all of the following apply:
  – Continuity of service is essential.
  – Shutdown of the system is impractical.
  – Proven effective employee protection is provided by following documented procedures and using special equipment.
- Service and maintenance of fire alarm and extinguishing systems and their components if:
  – Other employees depend on these systems for fire safety;

  AND

  – Employees working on fire extinguishing systems are protected from the unexpected release of hazardous energy by appropriate alternative measures.
- Work on electric equipment receiving power only through a cord and plug if:
  – Unplugging the equipment eliminates the possibility of unexpected energization, unexpected start up, or the release of stored energy;

  AND

  – The plug is kept under the exclusive control of the employee doing the service or maintenance.
- Exposure to electrical hazards from electrical work on, near, or with conductors or equipment that is covered by chapter 296-24 WAC, Part L, Electrical.
- Service and maintenance during normal production operations, if an employee is not required to:
  – Remove or bypass a guard or other safety device;

  OR

  – Place any body part into the point of operation or any other hazardous area created by machine operation.
- Minor tool changes, adjustments, and other minor service during normal production operations if:
  – They are routine, repetitive, and integral to the use of the equipment for production;

  AND

  – The work is done using measures which provide effective protection from hazards.

NEW SECTION

WAC 296-803-200 Summary.

Your responsibility:

To establish an energy control program.

You must:

WAC 296-803-20005 Establish a written energy control program.

NEW SECTION

WAC 296-803-20005 Establish a written energy control program.

You must:

✎ Establish a written energy control program to protect employees that service or maintain a machine or equipment from injury caused by the:

– Unexpected energization or start up of the machine or equipment;

OR

– Release of stored energy.

✎ Make sure the program contains **all** of the following:

– Energy control procedures as described in WAC 296-803-500.

– Employee training as described in WAC 296-803-600.

– Periodic reviews as described in WAC 296-803-700.

✎ Develop and document in writing energy control procedures to protect employees doing service or maintenance of a machine or equipment from potentially hazardous energy.

Exemption: You do not have to have **written** energy control procedures for a particular machine or equipment if **all** of the following apply:

- ✎ The machine or equipment has a single energy source that is easily identified and can be isolated.
- ✎ The machine or equipment is completely deenergized and deactivated by isolating and locking out the energy source.
- ✎ There's no stored or residual energy that could be a hazard to employees, and the machine or equipment cannot reaccumulate such energy after it's been shut down.
- ✎ The energy source can be locked out with a single lockout device.
- ✎ The machine or equipment is isolated from the energy source and locked out during service or maintenance.
- ✎ The authorized employee doing the service or maintenance has exclusive control of the lockout device.
- ✎ The service or maintenance does not create a hazard for other employees.
- ✎ The machine or equipment has never been unexpectedly energized or activated during service or maintenance.

You must:

✎ Make sure energy control procedures clearly and specifically outline:

– The scope, purpose, authorization, rules, and techniques

to control hazardous energy;

AND

– How you'll make sure employees follow the procedures.

✎ Make sure energy control procedures specifically identify at least the following:

– When the procedure must be used.

– What the specific procedural steps are for:

✂ Shutting down, isolating, blocking, and securing the machine or equipment.

✂ Placing, removing, and transferring lockout or tagout devices and who is responsible for them.

– How to test the machine or equipment to verify the effectiveness of lockout devices, tagout devices, and other energy control measures.

Note: Similar machines and equipment may be covered by a single written procedure if **all** of the following apply:

✎ They use the same type and magnitude of energy.

✎ They have the same or similar types of controls.

✎ The specific machines and equipment covered by the procedure are identified by at least type and location.

NEW SECTION

WAC 296-803-300 Summary.

Your responsibility:

To make sure new or modified machines and equipment can accept lockout devices.

You must:

WAC 296-803-30005 Make sure new or modified machines and equipment can accept lockout devices.

NEW SECTION

WAC 296-803-30005 Make sure new or modified machines and equipment can accept lockout devices.

You must:

✎ Make sure energy-isolating devices designed to accept a lockout device are provided on machines and equipment that:

– Are newly installed.

– Have major repair.

– Are renovated or modified.

NEW SECTION

WAC 296-803-400 Summary.

Your responsibility:

To provide appropriate means to control energy and lockout and tagout devices.

You must:

WAC 296-803-40005 Provide appropriate means to control energy.

WAC 296-803-40010 Make sure lockout and tagout devices meet these requirements.

WAC 296-803-40015 Make sure lockout devices meet these additional requirements.

WAC 296-803-40020 Make sure tagout devices meet these additional requirements.

NEW SECTION

WAC 296-803-40005 Provide appropriate means to control energy.

You must:

- Provide the means necessary to isolate, secure, or block machines and equipment from energy sources.

Note: Examples of means to control energy include:

- Locks.
- Tags.
- Chains.
- Wedges.
- Key blocks.
- Adapter pins.
- Self-locking fasteners.
- Blind flanges.
- Cribbing.

NEW SECTION

WAC 296-803-40010 Make sure lockout and tagout devices meet these requirements.

You must:

- Make sure lockout and tagout devices meet all of the

following:

- Create **no** additional hazards.
- Have a distinctive design or appearance.
- Are the only devices used for controlling energy.
- Are **not** used for any other purpose.
- Are durable enough to withstand the environment they're used in for the maximum time they're expected to be used.
- Are standardized within the facility by color, shape, or size.
- Identify the person applying the device.

NEW SECTION

WAC 296-803-40015 Make sure lockout devices meet these additional requirements.

You must:

✎ Make sure lockout devices are strong enough so that removing them by other than the normal unlocking method requires:

- Excessive force;

OR

- Unusual techniques such as the use of bolt cutters or other metal-cutting tools.

NEW SECTION

WAC 296-803-40020 Make sure tagout devices meet these additional requirements.

You must:

✎ Make sure all tags:

- Use the same print and format within a facility.
- Are constructed and printed so they will not deteriorate and the message on the tag remains legible when:

✂ Exposed to weather.

✂ Used in wet or damp locations.

✂ Used in corrosive environments such as areas where acid or alkali chemicals are handled or stored.

- Have a warning about **not** energizing the machine or equipment.

Note: The warning on the tag should include wording such as:

✎ Do not start.

✎ Do not open.

✎ Do not close.

✎ Do not energize.
✎ Do not operate.

You must:

✎ Make sure tagout devices are strong enough to prevent unintentional or accidental removal.

✎ Make sure the means used to attach the tag to the energy-isolating device meets all of the following:

– Is not reusable.

– Is self-locking.

– Can be attached by hand.

– Cannot be released with a force of less than fifty pounds.

– Is similar in design and basic characteristics to a one-piece, all-environment-tolerant, nylon cable tie.

NEW SECTION

WAC 296-803-500 Summary.

Your responsibility:

To make sure energy control procedures are used and include these requirements.

You must:

ENERGY CONTROL PROCEDURES

WAC 296-803-50005 Use energy control procedures.

APPLYING LOCKOUT OR TAGOUT DEVICES

WAC 296-803-50010 Meet these requirements when applying lockout or tagout devices.

WAC 296-803-50015 Meet these additional requirements when applying lockout devices.

WAC 296-803-50020 Meet these additional requirements when applying tagout devices.

STORED ENERGY

WAC 296-803-50025 Protect employees from the hazards of stored and residual energy.

VERIFYING MACHINE ISOLATION

WAC 296-803-50030 Verify that the machine or equipment is safe before starting work.

REMOVING ENERGY CONTROL DEVICES

WAC 296-803-50035 Meet these requirements when removing lockout or tagout devices and energizing the machine or equipment.

TEMPORARY ENERGIZATION

WAC 296-803-50040 Meet these requirements if it's necessary to temporarily energize a machine, equipment, or component for testing or positioning.

SHIFT OR PERSONNEL CHANGES

WAC 296-803-50045 Protect employees during shift or personnel changes.

GROUP LOCKOUT/TAGOUT

WAC 296-803-50050 Protect employees working in a group.

WAC 296-803-50055 Meet these additional requirements if more than one group is used.

OUTSIDE EMPLOYEES

WAC 296-803-50060 Coordinate with outside employers servicing or maintaining your machines or equipment.

NEW SECTION

WAC 296-803-50005 Use energy control procedures.

You must:

✎ Use energy control procedures to protect employees servicing or maintaining machines and equipment from potentially hazardous energy.

✎ Use a lockout system if an energy-isolating device can be locked out.

Exemption: A tagout system may be used instead of a lockout system if it meets **all** of the following:

✎ The tagout device is attached where you would have put the lockout device.

✎ The tagout system provides the same level of employee protection as a lockout system.

✎ You can demonstrate that the tagout system:

– Meets all tagout requirements of this chapter.

– Includes additional safety measures to provide the same level of safety as a lockout system.

Note: Additional safety measures used with the tagout system to provide protection equal to a lockout system could include actions such as:

✎ Removing part of the isolating circuit.

✎ Blocking a controlling switch.

✎ Opening an extra disconnecting device.

✎ Removing a valve handle.

You must:

✎ Use a tagout system if an energy-isolating device cannot be locked out.

NEW SECTION

WAC 296-803-50010 Meet these requirements when applying lockout or tagout devices.

You must:

✎ Make sure, before a machine or equipment is turned off, that the authorized employee knows **all** of the following:

- Type and magnitude of the energy.
- Hazards of the energy to be controlled.
- Method or means to control the energy.

✎ Turn off or shut down the machine or equipment using established procedures.

✎ Completely isolate the machine or equipment from its energy sources using the appropriate energy-isolating devices after the machine or equipment has been turned off.

✎ Make sure you or the authorized employee notify affected employees that the machine or equipment is being locked or tagged out before the devices are applied.

✎ Make sure a lockout or tagout device is applied:

– For each energy-isolating device.

– Only by the authorized employee doing the service or maintenance.

NEW SECTION

WAC 296-803-50015 Meet these additional requirements when applying lockout devices.

You must:

✎ Make sure lockout devices hold the energy-isolating device in a "safe" or "off" position.

NEW SECTION

WAC 296-803-50020 Meet these additional requirements when applying tagout devices.

You must:

✎ Make sure a tagout device is put on an energy-isolating device so it clearly shows that moving the energy-isolating device from the "safe" or "off" position is prohibited.

✎ Make sure a tagout device, when used with an energy-isolating device that can be locked out, is fastened to the device at the same point a lock would have been attached.

✎ Make sure a tagout device that cannot be attached directly to an energy-isolating device is located:

– As close as safely possible to the energy-isolating device;

AND

– In a position that is immediately obvious to anyone attempting to operate the energy-isolating device.

NEW SECTION

WAC 296-803-50025 Protect employees from the hazards of stored and residual energy.

You must:

✎ Make sure all potentially hazardous stored and residual energy is relieved, disconnected, restrained, or otherwise rendered safe after the lockout or tagout devices have been put on the energy-isolating devices.

✎ Continue to verify the isolation of machines and equipment that could reaccumulate stored energy to a hazardous level until:

– Service or maintenance is completed;

OR

– The possibility of reaccumulating hazardous energy does not exist.

NEW SECTION

WAC 296-803-50030 Verify that the machine or equipment is safe before starting work.

You must:

✎ Make sure the authorized employee verifies that the machine or equipment that's been locked out or tagged out has been isolated from all energy sources and deenergized before starting work.

Note: The authorized employee can verify that the machine or equipment has been isolated from its energy sources and stored energy has been made safe by using a method or combination of methods that may include, but are not limited to, the following:

✎ Trying to start or energize the machine or equipment (tryout).

✎ Testing with appropriate test equipment.

✎ Visually inspecting switches, valves, circuit breakers, etc., to confirm they have been secured in the "off" or "safe" position.

NEW SECTION

WAC 296-803-50035 Meet these requirements when removing lockout or tagout devices and energizing the machine or equipment.

You must:

✎ Make sure the authorized employee does the following before removing any lockout or tagout device:

– Inspects the work area to make sure nonessential items have been removed;

AND

– Verifies the machine or equipment is in operating condition and ready to energize.

✎ Make sure only the authorized employee who applied a lockout or tagout device removes it.

Exemption: The employer may have the lockout or tagout device removed by someone other than the authorized employee who applied it if **all** of the following conditions are met:

✎ The energy control program has documented, specific procedures and training for this situation.

✎ You can show that the specific procedures used are as safe as having the device removed by the authorized employee who applied it.

✎ The specific procedures include at least the following:

– Verifying the authorized employee who applied the device is not at the facility.

– Making all reasonable efforts to contact and inform the authorized employee that the lockout or tagout device is being removed.

– Making sure the authorized employee is informed, before resuming work at the facility, that the lockout or tagout device has been removed.

You must:

✎ Do the following before energizing or starting the machine or equipment:

– Notify affected employees that the lockout or tagout devices have been removed.

– Check that employees in the area are in positions that make it safe to energize the machine or equipment.

NEW SECTION

WAC 296-803-50040 Meet these requirements if it's necessary to temporarily energize a machine, equipment, or component for testing or positioning.

You must:

✎ Follow your normal energy control procedures to:

– Remove the lockout or tagout devices.

– Energize the machine, equipment, or component.

– Reapply the lockout or tagout devices when testing or positioning is completed.

NEW SECTION

WAC 296-803-50045 Protect employees during shift or personnel changes.

You must:

✎ Use specific procedures for shift or personnel changes to:

– Make sure there's continuous lockout or tagout protection during the change;

AND

– Provide for the orderly transfer of lockout or tagout device protection between employees.

NEW SECTION

WAC 296-803-50050 Protect employees working in a group.

You must:

✎ Make sure your energy control procedures provide each member of a crew, craft, department, or other group with the same level of protection as that provided by an individual lockout or tagout device.

✎ Make sure each authorized employee:

– Puts a personal lockout or tagout device on the group lockout device, lockbox, or comparable mechanism before beginning work;

AND

– Does **not** remove it until they have finished work on the machine or equipment.

✎ Assign a primary authorized employee who:

– Has overall responsibility for the service or maintenance;

– Attaches their lockout or tagout device to the energy-isolating device when the equipment is deenergized and before any work begins;

AND

– Is the last person to remove their lockout or tagout device when the job is completed.

Definition:

The ***primary authorized employee*** is the authorized employee who has overall responsibility for meeting the requirements of the lockout/tagout procedures.

NEW SECTION

WAC 296-803-50055 Meet these additional requirements if more than one group is used.

You must:

✎ Do **all** of the following if more than one group works on a machine or equipment that has to be locked or tagged out:

– Assign an authorized employee as the group coordinator with overall responsibility to:

✂ Coordinate the different work groups;

AND

✂ Maintain continuous lockout or tagout protection.

– Assign a primary authorized employee in each group who has:

✂ Responsibility for the group of employees who are protected by a group lockout or tagout device;

AND

✂ A way to determine which employees of the group are exposed to the machine or equipment that's locked or tagged out.

NEW SECTION

WAC 296-803-50060 Coordinate with outside employers servicing or maintaining your machines or equipment.

You must:

✎ Do the following before allowing another employer's personnel to service or maintain machines or equipment if your energy control procedures require they be locked or tagged out:

– Inform the outside employer of your lockout or tagout procedures.

– Make sure the outside employer informs you of their lockout or tagout procedures.

– Make sure you and the outside employer confirm that all employees understand and will follow the restrictions of the other employer's energy control program.

NEW SECTION

WAC 296-803-600 Summary.

Your responsibility:

To train employees on your energy control program.

You must:

WAC 296-803-60005 Provide and document employee training on the energy control program.

WAC 296-803-60010 Provide additional training if you use tagout devices.

WAC 296-803-60015 Retrain employees when necessary.

NEW SECTION

WAC 296-803-60005 Provide and document employee training on the energy control program.

You must:

✎ Train employees to make sure that they:

- Understand the purpose and function of the energy control program;

AND

- Have the knowledge and skills necessary to carry out their program responsibilities.

✎ Train each authorized employee in:

- The type and magnitude of energy available in the workplace.

- Recognizing hazardous energy sources that apply.

- Methods and means to isolate and control energy.

✎ Instruct each affected employee in the purpose and use of the energy control procedures.

✎ Instruct all employees who work or may work where energy control procedures might be used about the:

- Procedures being used;

AND

- Prohibition against attempting to restart or reenergize a machine or equipment that's locked out or tagged out.

✎ Document that employee training has been done and kept up to date.

- Include the employee's name and the training date.

NEW SECTION

WAC 296-803-60010 Provide additional training if you use tagout devices.

You must:

✎ Make sure employees are trained in the following:

- Tags are warning devices and do not provide the same level of physical restraint as a lock.

- When attached to energy-isolating devices, tags are not to be:

✂ Removed without the approval of the authorized person responsible for it;

OR

✂ Bypassed, ignored, or otherwise defeated.

- Tags need to be legible and understandable to be effective.

- Tags may evoke a false sense of security.

- The meaning of tags needs to be understood as part of the overall energy control program.

- Tags and their means of attachment must be:

✂ Securely attached to energy-isolating devices so they cannot be inadvertently or accidentally detached;

AND

✂ Made of materials that will withstand the environmental conditions they will be exposed to.

NEW SECTION

WAC 296-803-60015 Retrain employees when necessary.

You must:

✎ Retrain authorized and affected employees to introduce new or revised control methods and procedures when there's a change in **any** of the following:

- Job assignments.

- Machines, equipment, or processes that present a new hazard.

- Energy control procedures.

✎ Retrain employees to reestablish proficiency when:

- A periodic inspection shows the employee deviates from, or has inadequate knowledge of, the energy control procedures;

OR

- The employer has reason to believe retraining is necessary.

NEW SECTION

WAC 296-803-700 Summary.

Your responsibility:

To do periodic reviews to make sure employees know and use your energy control procedures.

You must:

WAC 296-803-70005 Perform and document periodic reviews to verify employees know and follow the energy control procedures.

WAC 296-803-70010 Do periodic reviews of procedures using

lockout devices.

WAC 296-803-70015 Do periodic reviews of procedures using tagout devices.

NEW SECTION

WAC 296-803-70005 Perform and document periodic reviews to verify employees know and follow the energy control procedures.

You must:

✎ Do a periodic review at least annually to:

– Make sure employees know and can apply the energy control procedures.

– Correct any deviations or inadequacies identified.

Exemption: Energy control procedures used less frequently than once a year only need to be reviewed before being used.

You must:

✎ Have the periodic review done by an authorized employee other than the ones using the energy control procedure being reviewed.

✎ Document that periodic reviews have been done.

– Include all of the following:

✂ Machine or equipment the energy control procedure was used for.

✂ Date of the review.

✂ Employees included in the review.

✂ Person doing the review.

NEW SECTION

WAC 296-803-70010 Do periodic reviews of procedures using lockout devices.

You must:

✎ Make sure, if a periodic review involves lockout devices, the reviewing employee reviews responsibilities with each authorized employee who uses the procedure.

Note: Periodic reviews of authorized employees using energy control procedures involving only lockout devices can be done in a group meeting if desired.

NEW SECTION

WAC 296-803-70015 Do periodic reviews of procedures using tagout devices.

You must:

✎ Make sure, if a periodic review involves tagout devices, the reviewing employee reviews with each authorized and affected employee the:

- Employee's responsibilities under the procedure;

AND

- Limitations of tagout devices.

Note: Periodic reviews of authorized and affected employees using energy control procedures involving tagout devices have to be done with each employee individually.

Reference: See WAC 296-803-60010, Provide additional training if you use tagout devices, in this chapter for the limitations of tagout devices.

NEW SECTION

WAC 296-803-800 Definitions.

Affected employee. An employee who's required to operate, use, or be in the area where a machine or equipment is locked or tagged out for service or maintenance.

Authorized employee. An employee who locks or tags out a machine or equipment to do service or maintenance.

Can be locked out. An energy-isolating device that can be locked in the "off" or "safe" position.

Energized. Connected to an energy source or containing residual or stored energy.

Energy-isolating device. A mechanical device that physically prevents transmitting or releasing energy. This includes, but is not limited to:

✎ Manually operated electrical circuit breakers.

✎ Disconnect switches.

✎ Manually operated switches that disconnect the conductors of a circuit from all ungrounded supply conductors if no pole of the switch can be operated independently.

✎ Line valves.

✎ Blocks.

✎ Similar devices used to block or isolate energy.

Energy source. Any source of electrical, mechanical, hydraulic, pneumatic, chemical, thermal or other energy,

including gravity.

Hot tap. A procedure which involves welding on pressurized pipelines, vessels, or tanks to install connections or accessories. It's commonly used to replace or add sections of pipeline used in air, gas, water, steam, and petrochemical distribution systems without interrupting service.

Lockout. Placing a lockout device on an energy-isolating device using an established procedure to make sure the machine or equipment cannot be operated until the lockout device is removed.

Lockout device. A device that uses a positive means, such as a key or combination lock, to hold an energy-isolating device in the "safe" or "off" position. This includes blank flanges and bolted slip blinds.

Normal production operations. Using a machine or equipment for its intended production function.

Primary authorized employee. An authorized employee who has overall responsibility for meeting the requirements of the lockout/tagout procedures.

Service and maintenance. Activities such as constructing, installing, setting-up, adjusting, modifying, maintaining, and servicing machines or equipment. It also includes lubricating, cleaning, unjamming, and making tool changes.

Setting-up. Work done to prepare a machine or equipment for normal production operations.

Tagout. Placing a tagout device on an energy-isolating device using an established procedure to indicate that the energy-isolating device and the machine or equipment being controlled may not be operated until the tagout device is removed.

Tagout device. A prominent warning device, such as a tag and a means of attachment. It can be securely fastened to an energy-isolating device to indicate that the energy-isolating device and the machine or equipment being controlled may not be operated until the tagout device is removed.